

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: BRADFORD G. ADDISON
BARNES & THORNBURG LLP
11 SOUTH MERIDIAN STREET
INDIANAPOLIS, IN 46204

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT AND
THE WRITTEN OPINION OF THE INTERNATIONAL
SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Date of mailing
(day/month/year)

10 MAR 2017

Applicant's or agent's file reference
32251-259113

FOR FURTHER ACTION See paragraphs 1 and 4 below

International application No.
PCT/US 16/60109

International filing date
(day/month/year) 02 November 2016 (02.11.2016)

Applicant TRIMACO, LLC

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

How? Directly to the International Bureau of WIPO preferably through ePCT or on paper to, 34 chemin des Colombettes
1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.
3. ☐ **With regard to any protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:**
- ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.
- ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. Reminders

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. These comments will be made available to the public after international publication. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established.

Shortly after the expiration of **18 months from the priority date, the international application will be published** by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau before the completion of the technical preparations for international publication (Rules 90*bis*.1 and 90*bis*.3).

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for **entry into the national phase** before those designated Offices. In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months. For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Within **19 months from the priority date, the applicant may request that a supplementary international search be carried out** by a different International Searching Authority that offers this service (Rule 45*bis*.1). The procedure for requesting supplementary international search is described in the *PCT Applicant's Guide*, International Phase, paragraphs 8.006-8.032.

Name and mailing address of the ISA/
Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-8300

Authorized officer

Lee W. Young

PCT Helpdesk: 571-272-4300
Telephone No. PCT OSP: 571-272-1114

Form PCT/ISA/220 (July 2014)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 32251-259113	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US 16/60109	International filing date (<i>day/month/year</i>) 02 November 2016 (02.11.2016)	(Earliest) Priority Date (<i>day/month/year</i>) 02 November 2015 (02.11.2015)
Applicant TRIMACO, LLC		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed.
☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (see Box No. II).

3. ☒ Unity of invention is lacking (see Box No. III).

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant.
☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- ☒ the text is approved as submitted by the applicant.
☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 1
☒ as suggested by the applicant.
☐ as selected by this Authority, because the applicant failed to suggest a figure.
☐ as selected by this Authority, because this figure better characterizes the invention.
- b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (January 2015)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 16/60109

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I: Claims 1-7, drawn to a non-slip mat.

Group II: Claims 8-20, drawn to a method for applying an adhesive coating material on a canvas.

-- Please See Supplemental Box --

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-7

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet (2)) (January 2015)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 16/60109

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - B32B 3/06, B32B 3/10, B32B 7/02, B32B 25/04, C08J 7/04 (2017.01) CPC - B32B 3/06, B32B 3/10, B32B 7/02, B32B 25/08, B32B 38/004, B32B 2307/744, C08J 7/042 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC(8)- B32B 3/06, B32B 3/10, B32B 7/02, B32B 25/04, C08J 7/04 (2017.01); CPC- B32B 3/06, B32B 3/10, B32B 7/02, B32B 25/08, B32B 38/004, B32B 2307/744, C08J 7/042 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched USPC- 442/19, 442/45, 442/59, 442/101, 442/149, 427/366, 427/510, 427/513, 427/516, 428/81, 428/102, 428/103; Patents and NPL (classification, keyword; search terms below) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Pub West (US EP JP WO), Pat Base (AU BE BR CA CH CN DE DK EP ES FI FR GB IN JP KR SE TH TW US WO), Google Patent, Google Scholar, Google Web, FPO; search terms: nonslip, nonskid, anti, slip, skid, resistant, mat, weave, woven, canvas, duck, sheet, edge, perimeter, fold, stitch, hem, serge, web, mesh, scrim, node, low, density, polyethylene...		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2003/0219566 A1 (BERKOWITZ et al.) 27 November 2003 (27.11.2003), Figs. 2-5; para [0003], [0008], [0035]-[0038], [0041], [0042]	1-7
Y	US 2,721,818 A (DOLNICK et al.) 25 October 1955 (25.10.1955), Figs. 1, 2, 5; col 1, ln 25 to col 2, ln 30	1, 2, 7
Y	US 2004/0038607 A1 (WILLIAMSON et al.) 26 February 2004 (26.02.2004), Fig. 2A; para [0030], [0038], [0056]	1, 3
Y	US 2004/0148887 A1 (DI PEDE) 05 August 2004 (05.08.2004), Fig. 2; para [0002], [0027], [0028], [0032], [0037], [0038], [0047], [0049], [0050], [0055], [0056], [0072]	1, 4-6
Y	US 2014/0141204 A1 (CALKINS) 22 May 2014 (22.05.2014), para [0019]-[0032]	1-7
Y	US 2009/0321001 A1 (DYE et al.) 31 December 2009 (31.12.2009), para [0015]-[0042]	1-7
<input type="checkbox"/> Further documents are listed in the continuation of Box C.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 11 February 2017		Date of mailing of the international search report 10 MAR 2017
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-8300		Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (January 2015)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 16/60109

Continued from Box No. III, Observations where unity of invention is lacking.

Special Technical Features

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Group II do not require a non-slip mat comprising: a top layer comprising of a woven material, the top layer having a first surface and a second surface; a middle layer comprising of a first synthetic polymer, the middle layer having a third surface and a fourth surface; and a bottom layer comprising of a second synthetic polymer that is different than the first synthetic polymer, the bottom layer having a fifth surface and a sixth surface; and a reinforced outer hem formed on at least one edge of the non-slip mat by folding all the layers of non-slip mat at least once inwardly toward the bottom layer; wherein the bottom layer has a repeated pattern; and wherein the entire second surface of the top layer is bonded to the entire third surface of the middle layer, and the entire fourth surface is bonded to the entire fifth surface of the bottom surface, as required by Group I.

Group I does not require a method for applying an adhesive coating material on a canvas comprising: heating the adhesive coating material to a temperature such that the coating material reaches at least a liquid state; heating at least one roller of an apparatus to apply a uniform thickness of the adhesive coating material; advancing the canvas through the apparatus in a forward direction to contact the at least one heated roller; applying, while advancing the canvas, a uniform coating of the adhesive coating material on a surface of the canvas with the at least one heated roller; and cooling the coated canvas to a room temperature; wherein applying the uniform coating of the adhesive coating material comprises: (i) applying the adhesive coating material on the at least one heated roller, and (ii) contacting the surface of the canvas with the at least one heated roller moving in a direction opposite to the travel of the canvas, as required by Group II.

Shared Common Features

The only feature shared by Groups I and II that would otherwise unify the groups is a woven/canvas material layer. However, this shared technical feature does not represent a contribution over prior art, because the shared technical feature is anticipated by US 2009/0321001 A1 to Dye, et al. (hereinafter 'Dye'). Dye discloses a woven/canvas material layer (para [0005], [0021], [0042]).

As the technical features were known in the art at the time of the invention, this cannot be considered a special technical feature that would otherwise unify the groups.

Groups I and II therefore lack unity under PCT Rule 13 because they do not share a same or corresponding special technical feature.

SEARCH HISTORY

Application Number	PCT/US 16/60109
Search Conducted By	SRH
Search Approved By	SRH

IPC, CPC, USPC Classifications Searched	IPC(8)- B32B 3/06, B32B 3/10, B32B 7/02, B32B 25/04, C08J 7/04 (2017.01) CPC- B32B 3/06, B32B 3/10, B32B 7/02, B32B 25/08, B32B 38/004, B32B 2307/744, C08J 7/042 USPC- 442/19, 442/45, 442/59, 442/101, 442/149, 427/366, 427/510, 427/513, 427/516, 428/81, 428/102, 428/103
Date Conducted	11 February 2017

Documentation Searched	Patent Literature and Non-Patent Literature
Search Terms Used	nonslip, nonskid, anti, slip, skid, resistant, mat, weave, woven, canvas, duck, sheet, edge, perimeter, fold, stitch, hem, serge, web, mesh, scrim, node, low, density, polyethylene, LDPE, PE, polyester, PET, polymer, terephthalate, PVC, polyvinylchloride, polyvinyl, chloride, webbed, emboss, network, rug, floor, covering
Date Conducted	11 February 2017

Electronic Database Searched	Pub West
Files Searched	(US Pat, PgPub, EPO, JPO: class, keyword)
Date Conducted	11 February 2017
Search Logic:	

DATE: Saturday, December 10, 2016

[Purge Queries](#)[Printable Copy](#)[Create Case](#)

Order Set
By Name Query
Side by Side

Hit
Count

Set
Name
Result
Set

Set
Name
Grid

Set Name
Classification

DB=PGPB,USPT,USOC,EPAB,JPAB; PLUR=NO; OP=ADJ

Date	<u>L42</u>	L31 and L22	15	<u>L42</u>	<u>L42</u>	<u>L42</u>
Date	<u>L41</u>	L32 and L22	7	<u>L41</u>	<u>L41</u>	<u>L41</u>
Date	<u>L40</u>	L32 and L31 and L21 and L3	0	<u>L40</u>	<u>L40</u>	<u>L40</u>
Date	<u>L39</u>	L32 and L31 and L21 and L6	0	<u>L39</u>	<u>L39</u>	<u>L39</u>
Date	<u>L38</u>	L32 and L31 and L21 and L9 and L3	0	<u>L38</u>	<u>L38</u>	<u>L38</u>
Date	<u>L37</u>	L32 and L31 and L21 and L9 and L8	2	<u>L37</u>	<u>L37</u>	<u>L37</u>
Date	<u>L36</u>	L32 and L31 and L21 and L9	11	<u>L36</u>	<u>L36</u>	<u>L36</u>
Date	<u>L35</u>	L32 and L31 and L21	17	<u>L35</u>	<u>L35</u>	<u>L35</u>
Date	<u>L34</u>	L32 and L31 and L22	0	<u>L34</u>	<u>L34</u>	<u>L34</u>
Date	<u>L33</u>	L32 and L31	17	<u>L33</u>	<u>L33</u>	<u>L33</u>
Date	<u>L32</u>	L7 and ((stitch OR hem\$ or serg\$) near (edg\$ OR perimeter\$ or fold\$))	102	<u>L32</u>	<u>L32</u>	<u>L32</u>
Date	<u>L31</u>	L7 and (fold\$ near (edg\$ OR perimeter\$))	585	<u>L31</u>	<u>L31</u>	<u>L31</u>
Date	<u>L30</u>	L21 and L15 and L14 and L10 and L9 and L8 and L3	7	<u>L30</u>	<u>L30</u>	<u>L30</u>
Date	<u>L29</u>	L21 and L15 and L14 and L10 and L9 and L8 and L6	4	<u>L29</u>	<u>L29</u>	<u>L29</u>
Date	<u>L28</u>	L21 and L15 and L14 and L10 and L9 and L8	127	<u>L28</u>	<u>L28</u>	<u>L28</u>
Date	<u>L27</u>	L21 and L14 and L10 and L9 and L8	582	<u>L27</u>	<u>L27</u>	<u>L27</u>
Date	<u>L26</u>	L21 and L10 and L9 and L8	5415	<u>L26</u>	<u>L26</u>	<u>L26</u>
Date	<u>L25</u>	L22 and L21 and L10 and L9 and L8 and L3	12	<u>L25</u>	<u>L25</u>	<u>L25</u>
Date	<u>L24</u>	L22 and L21 and L10 and L9 and L8 and L6	0	<u>L24</u>	<u>L24</u>	<u>L24</u>
Date	<u>L23</u>	L22 and L21 and L10 and L9 and L8	172	<u>L23</u>	<u>L23</u>	<u>L23</u>
Date	<u>L22</u>	L7 and (canvas\$ or duck\$)	1937	<u>L22</u>	<u>L22</u>	<u>L22</u>
Date	<u>L21</u>	L7 and mat\$	79607	<u>L21</u>	<u>L21</u>	<u>L21</u>
Date	<u>L20</u>	L17 and L16 and L15 and L14 and L3	9	<u>L20</u>	<u>L20</u>	<u>L20</u>
Date	<u>L19</u>	L17 and L16 and L15 and L14 and L6	2	<u>L19</u>	<u>L19</u>	<u>L19</u>
Date	<u>L18</u>	L17 and L16 and L15 and L14	130	<u>L18</u>	<u>L18</u>	<u>L18</u>
Date	<u>L17</u>	L7 and (layer\$ or multilayer\$ or sheet\$ or back\$ or coat\$).ab,clm,ti.	38019	<u>L17</u>	<u>L17</u>	<u>L17</u>
Date	<u>L16</u>	L7 and (mat\$ or weav\$ or woven\$ or canvas\$ or sheet\$).ab,clm,ti.	39439	<u>L16</u>	<u>L16</u>	<u>L16</u>
Date	<u>L15</u>	L7 and (roll\$ with (heat\$ or therm\$ or temperatur\$ or warm\$ or celsius\$ or fahrenheit\$ or centigrad\$ or f or c or ".degree.")).ab,clm,ti.	1103	<u>L15</u>	<u>L15</u>	<u>L15</u>
Date	<u>L14</u>	L7 and (nonslip\$ or nonski\$ OR	30209	<u>L14</u>	<u>L14</u>	<u>L14</u>

		((non or "not" or anti) near (slip\$ OR skid\$ or resist\$)).ab,clm,ti.				
Date	<u>L13</u>	L10 and L9 and L8 and L3	261	<u>L13</u>	<u>L13</u>	<u>L13</u>
Date	<u>L12</u>	L10 and L9 and L8 and L6	66	<u>L12</u>	<u>L12</u>	<u>L12</u>
Date	<u>L11</u>	L10 and L9 and L8	6199	<u>L11</u>	<u>L11</u>	<u>L11</u>
Date	<u>L10</u>	L7 and (layer\$ or multilayer\$ or sheet\$ or back\$ or coat\$)	97740	<u>L10</u>	<u>L10</u>	<u>L10</u>
Date	<u>L9</u>	L7 and (mat or weav\$ or woven\$ or canvas\$ or sheet\$)	40077	<u>L9</u>	<u>L9</u>	<u>L9</u>
Date	<u>L8</u>	L7 and (roll\$ with (heat\$ or therm\$ or temperatur\$ or warm\$ or celsius\$ or fahrenheit\$ or centigrad\$ or f or c or ".degree."))	8379	<u>L8</u>	<u>L8</u>	<u>L8</u>
Date	<u>L7</u>	(nonslip\$ or nonski\$ OR ((non or "not" or anti) near (slip\$ OR skid\$ or resist\$)))	110709	<u>L7</u>	<u>L7</u>	<u>L7</u>
Date	<u>L6</u>	L5 or L4	178089	<u>L6</u>	<u>L6</u>	<u>L6</u>
Date	<u>L5</u>	(MAY or WANG or KHER).in.	178089	<u>L5</u>	<u>L5</u>	<u>L5</u>
Date	<u>L4</u>	(TRIMACO).as.	3	<u>L4</u>	<u>L4</u>	<u>L4</u>
Date	<u>L3</u>	L2 or L1	32559	<u>L3</u>	<u>L3</u>	<u>L3</u>
Date	<u>L2</u>	(442/19 or 442/45 or 442/59 or 442/101 or 442/149 or 427/366 or 427/510 or 427/513 or 427/516 or 428/81 or 428/102 or 428/103).ccls.	8400	<u>L2</u>	<u>L2</u>	<u>L2</u>
Date	<u>L1</u>	(B32B3/06 or B32B3/10 or B32B7/02 or B32B25/04 or C08J7/04).ipc. or (B32B3/06 or B32B3/10 or B32B7/02 or B32B25/08 or B32B38/004 or B32B2307/744 or C08J7/042).cpc.	24516	<u>L1</u>	<u>L1</u>	<u>L1</u>

DATE: Saturday, February 11, 2017 [Purge Queries](#) [Printable Copy](#) [Create Case](#)

Order	<u>Set</u> <u>Name</u>	<u>Query</u>	<u>Hit</u> <u>Count</u>	<u>Set</u> <u>Name</u> Result Set	<u>Set</u> <u>Name</u> Grid	<u>Set Name</u> Classification
By	Side by Side					

DB=PGPB,USPT,USOC,EPAB,JPAB; PLUR=NO; OP=ADJ

Date	<u>L30</u>	L28 and L20 and L19 and L3	0	<u>L30</u>	<u>L30</u>	<u>L30</u>
Date	<u>L29</u>	L28 and L20 and L19	23	<u>L29</u>	<u>L29</u>	<u>L29</u>
Date	<u>L28</u>	L7 and (node\$ with (nonslip\$ or nonski\$ OR ((non or "not" or anti) near (slip\$ OR skid\$ or resist\$))))	270	<u>L28</u>	<u>L28</u>	<u>L28</u>
Date	<u>L27</u>	L24 and L20 and L19 and L3	0	<u>L27</u>	<u>L27</u>	<u>L27</u>
Date	<u>L26</u>	L24 and L20 and L19 and L6	0	<u>L26</u>	<u>L26</u>	<u>L26</u>
Date	<u>L25</u>	L24 and L20 and L19	41	<u>L25</u>	<u>L25</u>	<u>L25</u>

Date	<u>L24</u>	L7 and (node\$.ab,clm,ti.	1087	<u>L24</u>	<u>L24</u>	<u>L24</u>
Date	<u>L23</u>	L20 and L19 and L12	6	<u>L23</u>	<u>L23</u>	<u>L23</u>
Date	<u>L22</u>	L21 and L20 and L19	1	<u>L22</u>	<u>L22</u>	<u>L22</u>
Date	<u>L21</u>	L7 and (web\$ with node\$.ab,clm,ti.	7	<u>L21</u>	<u>L21</u>	<u>L21</u>
Date	<u>L20</u>	L7 and (mat\$ or web\$ or weav\$ or woven\$ or canvas\$ or sheet\$ or scrim\$ or mesh\$.ab,clm,ti.	41585	<u>L20</u>	<u>L20</u>	<u>L20</u>
Date	<u>L19</u>	L7 and (nonslip\$ or nonski\$ OR ((non or "not" or anti) near (slip\$ OR skid\$ or resist\$))).ab,clm,ti.	30388	<u>L19</u>	<u>L19</u>	<u>L19</u>
Date	<u>L18</u>	L12 and L10 and L8 and L3	0	<u>L18</u>	<u>L18</u>	<u>L18</u>
Date	<u>L17</u>	L12 and L10 and L8 and L6	0	<u>L17</u>	<u>L17</u>	<u>L17</u>
Date	<u>L16</u>	L12 and L11 and L10 and L8	4	<u>L16</u>	<u>L16</u>	<u>L16</u>
Date	<u>L15</u>	L12 and L10 and L8	23	<u>L15</u>	<u>L15</u>	<u>L15</u>
Date	<u>L14</u>	L12 and L10 and L9 and L8	8	<u>L14</u>	<u>L14</u>	<u>L14</u>
Date	<u>L13</u>	L12 and L11 and L10 and L9 and L8	1	<u>L13</u>	<u>L13</u>	<u>L13</u>
Date	<u>L12</u>	L7 and (web\$ with node\$)	46	<u>L12</u>	<u>L12</u>	<u>L12</u>
Date	<u>L11</u>	L7 and (((low and densit\$) near (polyethylene or PE or (poly\$ near ethylen\$))) OR LDPE or (LD near PE))	1497	<u>L11</u>	<u>L11</u>	<u>L11</u>
Date	<u>L10</u>	L7 and (polyester\$ or (poly\$ near ester\$) or (polyethylene near terephthalate\$) or (ethylene near terephthalate\$) or PET)	19060	<u>L10</u>	<u>L10</u>	<u>L10</u>
Date	<u>L9</u>	L7 and (PVC OR polyvinylchlorid\$ OR (polyvinyl near chlorid\$) or (poly\$ near (vinylchlorid\$ or (vinyl and chlorid\$))))	8907	<u>L9</u>	<u>L9</u>	<u>L9</u>
Date	<u>L8</u>	L7 and (mat\$ or web\$ or weav\$ or woven\$ or canvas\$ or sheet\$ or scrim\$ or mesh\$)	89345	<u>L8</u>	<u>L8</u>	<u>L8</u>
Date	<u>L7</u>	(nonslip\$ or nonski\$ OR ((non or "not" or anti) near (slip\$ OR skid\$ or resist\$)))	111659	<u>L7</u>	<u>L7</u>	<u>L7</u>
Date	<u>L6</u>	L5 or L4	181145	<u>L6</u>	<u>L6</u>	<u>L6</u>
Date	<u>L5</u>	(MAY or WANG or KHER).in.	181145	<u>L5</u>	<u>L5</u>	<u>L5</u>
Date	<u>L4</u>	(TRIMACO).as.	3	<u>L4</u>	<u>L4</u>	<u>L4</u>
Date	<u>L3</u>	L2 or L1	34050	<u>L3</u>	<u>L3</u>	<u>L3</u>
Date	<u>L2</u>	(442/19 or 442/45 or 442/59 or 442/101 or 442/149 or 427/366 or 427/510 or 427/513 or 427/516 or 428/81 or 428/102 or 428/103).ccls.	8401	<u>L2</u>	<u>L2</u>	<u>L2</u>
Date	<u>L1</u>	(B32B3/06 or B32B3/10 or	26010	<u>L1</u>	<u>L1</u>	<u>L1</u>

B32B7/02 or B32B25/04 or
 C08J7/04).ipc. or (B32B3/06 or
 B32B3/10 or B32B7/02 or
 B32B25/08 or B32B38/004 or
 B32B2307/744 or C08J7/042).cpc.

Electronic Database Searched	Google
Files Searched	Google Patent
Date Conducted	11 February 2017
<p style="text-align: center;">Search Logic:</p> <p>(nonslip OR ((slip OR skid) resistant) OR (non slip)) (coat roller) (weave OR woven OR canvas) About 10,700 results (0.49 seconds)</p> <p>(nonslip OR antislip OR ((slip OR skid) resistant) OR ((non OR anti) slip)) (coat roller) (roller (heat OR thermal OR temperature OR warm OR celsius OR fahrenheit OR centigrade OR F OR C OR ".degree.")) (weave OR woven OR canvas OR duck OR sheet OR scrim OR fabric) (fold (edge OR perimeter) (stitch OR hem)) About 954 results (0.74 seconds)</p> <p>(nonslip OR antislip OR ((slip OR skid) resistant) OR ((non OR anti) slip)) (coat roller) (roller (heat OR thermal OR temperature OR warm OR celsius OR fahrenheit OR centigrade OR F OR C OR ".degree.")) (canvas OR duck) (fold (edge OR perimeter) (stitch OR hem)) About 26 results (0.60 seconds)</p> <p>(nonslip OR antislip OR ((slip OR skid) resistant) OR ((non OR anti) slip)) (coat roller) (canvas OR duck) (fold (edge OR perimeter) (stitch OR hem)) About 25 results (0.49 seconds)</p> <p>(coat roller) (canvas OR duck) (roller (heat OR thermal OR temperature OR warm OR celsius OR fahrenheit OR centigrade OR F OR C OR ".degree.")) About 2,340 results (0.44 seconds)</p> <p>(rug OR mat) (fold (edge OR perimeter) (all layers) (stitch OR hem)) About 1,720 results (0.43 seconds)</p> <p>(nonslip OR ((slip OR skid) resistant) OR (non slip)) (weave OR woven OR canvas OR duck) ((low-density polyethylene) OR LDPE) (polyester (scrim OR mesh)) (emboss nodes) 4 results (0.68 seconds)</p> <p>(nonslip OR ((slip OR skid) resistant) OR (non slip)) (weave OR woven) (polyester (scrim OR mesh) (PVC OR (polyvinylchloride OR (polyvinyl chloride)))) (webbed network nodes) 1 result (0.50 seconds)</p> <p>(mat OR floor OR rug OR covering) (nonslip OR ((slip OR skid) resistant) OR (non slip)) (weave OR woven OR mesh OR scrim) (resin OR polymer) (web nodes) (emboss OR laminate) 3 results (0.48 seconds)</p>	

Electronic Database Searched	Google
Files Searched	Google Scholar

Date Conducted	11 February 2017
Search Logic:	
(nonslip OR ((slip OR skid) resistant) OR (non slip)) (coat roller) (weave OR woven OR canvas) About 15,700 results (0.07 sec)	
(nonslip OR antislip OR ((slip OR skid) resistant) OR ((non OR anti) slip)) (coat roller) (roller (heat OR thermal OR temperature OR warm OR celsius OR fahrenheit OR centigrade OR F OR C OR ".degree.")) (weave OR woven OR canvas OR duck OR sheet OR scrim OR fabric) (fold (edge OR perimeter) (stitch OR hem)) About 21,100 results (0.10 sec)	
(nonslip OR antislip OR ((slip OR skid) resistant) OR ((non OR anti) slip)) (coat roller) (roller (heat OR thermal OR temperature OR warm OR celsius OR fahrenheit OR centigrade OR F OR C OR ".degree.")) (canvas OR duck) (fold (edge OR perimeter) (stitch OR hem)) About 2,130 results (0.09 sec)	
(nonslip OR antislip OR ((slip OR skid) resistant) OR ((non OR anti) slip)) (coat roller) (canvas OR duck) (fold (edge OR perimeter) (stitch OR hem)) About 1,610 results (0.07 sec)	
(coat roller) (canvas OR duck) (roller (heat OR thermal OR temperature OR warm OR celsius OR fahrenheit OR centigrade OR F OR C OR ".degree.")) About 20,100 results (0.08 sec)	
(rug OR mat) (fold (edge OR perimeter) (all layers) (stitch OR hem)) About 12,900 results (0.06 sec)	
(nonslip OR ((slip OR skid) resistant) OR (non slip)) (weave OR woven OR canvas OR duck) ((low-density polyethylene) OR LDPE) (polyester (scrim OR mesh)) (emboss nodes) About 26 results (0.08 sec)	
(nonslip OR ((slip OR skid) resistant) OR (non slip)) (weave OR woven) (polyester (scrim OR mesh) (PVC OR (polyvinylchloride OR (polyvinyl chloride)))) (webbed network nodes) About 41 results (0.07 sec)	
(mat OR floor OR rug OR covering) (nonslip OR ((slip OR skid) resistant) OR (non slip)) (weave OR woven OR mesh OR scrim) (resin OR polymer) (web nodes) (emboss OR laminate) About 555 results (0.10 sec)	

Electronic Database Searched	Free Patents Online
Files Searched	(US Pat, PubMed, EPO, JPO, WIPO, NPL: class, keyword)
Date Conducted	11 February 2017
Search Logic:	
(nonslip OR ((slip OR skid) resistant) OR (non slip)) (coat roller) (weave OR woven OR canvas) Matches 1 - 50 out of 65764	
(nonslip OR antislip OR ((slip OR skid) resistant) OR ((non OR anti) slip)) (coat roller) (roller (heat OR thermal OR temperature OR warm OR celsius OR fahrenheit OR centigrade OR F OR C OR ".degree.")) (weave OR woven OR canvas OR duck OR sheet OR scrim OR fabric) (fold (edge OR perimeter) (stitch OR hem)) Matches 1 - 50 out of 1864	
(nonslip OR antislip OR ((slip OR skid) resistant) OR ((non OR anti) slip)) (coat roller) (roller (heat OR	

thermal OR temperature OR warm OR celsius OR fahrenheit OR centigrade OR F OR C OR ".degree.")) (canvas OR duck) (fold (edge OR perimeter) (stitch OR hem))

Matches 1 - 50 out of 93

(nonslip OR antislip OR ((slip OR skid) resistant) OR ((non OR anti) slip)) (coat roller) (canvas OR duck) (fold (edge OR perimeter) (stitch OR hem))

Matches 1 - 50 out of 100

(coat roller) (canvas OR duck) (roller (heat OR thermal OR temperature OR warm OR celsius OR fahrenheit OR centigrade OR F OR C OR ".degree."))

Matches 1 - 50 out of 9085

(rug OR mat) (fold (edge OR perimeter) (all layers) (stitch OR hem))

Matches 1 - 50 out of 6121

(nonslip OR ((slip OR skid) resistant) OR (non slip)) (weave OR woven OR canvas OR duck) ((low-density polyethylene) OR LDPE) (polyester (scrim OR mesh)) (emboss nodes)

Matches 1 - 50 out of 51

(nonslip OR ((slip OR skid) resistant) OR (non slip)) (weave OR woven) (polyester (scrim OR mesh) (PVC OR (polyvinylchloride OR (polyvinyl chloride)))) (webbed network nodes)

Matches 1 - 50 out of 8544

(mat OR floor OR rug OR covering) (nonslip OR ((slip OR skid) resistant) OR (non slip)) (weave OR woven OR mesh OR scrim) (resin OR polymer) (web nodes) (emboss OR laminate)

Matches 1 - 50 out of 689

Electronic Database Searched	Pat Base
Files Searched	<p>Full-text: AU BE BR CA CH CN DE DK EP ES FI FR GB IN JP KR SE TH TW US WO</p> <p>Bibliographic: (Europe) AT BA BE BG CH CS CY CZ DD DK EE ES FI GE GR HR HU IE IS IT LT LU LV MC MD MT NL NO PL PT RO RS SE SI SK SM TR UA YU (Asia) EA GC HK ID IL IN KZ MN MY PH RU SG SU TH TJ TW UZ VN (North America) CA CR CU DO GT HN MX NI PA SV TT (South America) AR BR CL CO EC PE UY (Australasia) AU NZ (Africa) AP DZ EG KE MA MW OA ZA ZM ZW</p>
Date Conducted	11 February 2017
<p align="center">Search Logic:</p> <p>Search 1: (nonslip* or nonski* OR ((non or "not" or anti) near (slip* OR skid* or resist*))) (Results 219287)</p> <p>Search 2: 1 and SP=(roll* and (heat* or therm* or temperatur* or warm* or celsius or fahrenheit or centigrad* or f or c or ".degree.")) (Results 11921)</p> <p>Search 3: 2 and (mat* or weav* or woven* or canvas* or sheet*) (Results 8380)</p> <p>Search 4: 3 and (layer* or multilayer* or sheet* or back* or coat*) (Results 6347)</p> <p>Search 5: 4 and ((edg* OR perimeter*) near (stitch* OR hem* OR serg*)) (Results 26)</p>	

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

To:

ADDISON, Bradford G.
Barnes & Thornburg LLP
11 South Meridian Street
Indianapolis, Indiana 46204
ÉTATS-UNIS D'AMÉRIQUE

Date of mailing (day/month/year) 20 January 2017 (20.01.2017)	
Applicant's or agent's file reference 32251-259113	IMPORTANT NOTIFICATION
International application No. PCT/US2016/060109	International filing date (day/month/year) 02 November 2016 (02.11.2016)

1. The following indications appeared on record concerning:									
<input type="checkbox"/> the applicant	<input checked="" type="checkbox"/> the inventor								
<input type="checkbox"/> the agent	<input type="checkbox"/> the common representative								
Name and Address KHER, Akashdeep 2300 Gateway Center Blvd. Suite 200 Morrisville, North Carolina 27560 United States of America	<table border="1"><tr><td>State of Nationality</td><td>State of Residence</td></tr><tr><td colspan="2">Telephone No.</td></tr><tr><td colspan="2">Facsimile No.</td></tr><tr><td colspan="2">E-mail address</td></tr></table>	State of Nationality	State of Residence	Telephone No.		Facsimile No.		E-mail address	
State of Nationality	State of Residence								
Telephone No.									
Facsimile No.									
E-mail address									
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:									
<input type="checkbox"/> the person	<input checked="" type="checkbox"/> the name								
<input type="checkbox"/> the address	<input type="checkbox"/> the nationality								
<input type="checkbox"/> the residence									
Name and Address KHERA, Akashdeep 2300 Gateway Center Blvd. Suite 200 Morrisville, North Carolina 27560 United States of America	<table border="1"><tr><td>State of Nationality</td><td>State of Residence</td></tr><tr><td colspan="2">Telephone No.</td></tr><tr><td colspan="2">Facsimile No.</td></tr><tr><td colspan="2">E-mail address <input type="checkbox"/> Notifications by e-mail authorized</td></tr></table>	State of Nationality	State of Residence	Telephone No.		Facsimile No.		E-mail address <input type="checkbox"/> Notifications by e-mail authorized	
State of Nationality	State of Residence								
Telephone No.									
Facsimile No.									
E-mail address <input type="checkbox"/> Notifications by e-mail authorized									
3. Further observations, if necessary:									
4. A copy of this notification has been sent to:									
<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the International Preliminary Examining Authority								
<input type="checkbox"/> the International Searching Authority	<input type="checkbox"/> the designated Offices concerned								
<input type="checkbox"/> the Authority(ies) specified for supplementary search	<input type="checkbox"/> the elected Offices concerned								
	<input type="checkbox"/> other:								

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Olaiz Alicia
Facsimile No. +41 22 338 89 65	e-mail pct.team2@wipo.int Telephone No. +41 22 338 74 02

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION RELATING TO DECLARATION MADE UNDER PCT RULE 4.17

(PCT Rules 26ter and 48.2(a)(x)
and Administrative Instructions, Section 419)

To:

ADDISON, Bradford G.
Barnes & Thornburg LLP
11 South Meridian Street
Indianapolis, Indiana 46204
ÉTATS-UNIS D'AMÉRIQUE

Date of mailing (day/month/year) 20 January 2017 (20.01.2017)	
Applicant's or agent's file reference 32251-259113	IMPORTANT NOTIFICATION
International application No. PCT/US2016/060109	International filing date (day/month/year) 02 November 2016 (02.11.2016)
Applicant TRIMACO, LLC	

- The applicant is hereby **notified** of the following regarding the declaration indicated below in respect of KHERA, Akashdeep, MAY, David C., WANG, Yichen :
 - ☐ declaration as to the identity of the inventor (Rules 4.17(i) and 51bis.1(a)(i) and Section 211)
 - ☐ declaration as to the applicant's entitlement, as at the international filing date, to apply for or be granted a patent (Rules 4.17(ii) and 51bis.1(a)(ii) and Section 212)
 - ☐ declaration as to the applicant's entitlement, as at the international filing date, to claim priority of the earlier application (Rules 4.17(iii) and 51bis.1(a)(iii) and Section 213)
 - ☒ declaration of inventorship (for the purposes of the designation of the United States of America) (Rules 4.17(iv) and 51bis.1(a)(iv) and Section 214)
 - ☐ declaration as to non-prejudicial disclosures or exceptions to lack of novelty (Rules 4.17(v) and 51bis.1(a)(v) and Section 215)
- ☒ **Addition or correction of the declaration within the time limit under Rule 26ter.1.**

The added or corrected declaration was received on **18 January 2017 (18.01.2017)** , which was within the time limit under Rule 26ter.1.

Any declaration referred to under items 1(i) to (v), whether or not the declaration complies with Rule 4.17, will be published as part of the international application pursuant to Rule 48.2(a)(x).
- ☐ **Failure to add or correct the declaration within the time limit under Rule 26ter.1.**

The declaration was received on which was **after** the expiration of the time limit under Rule 26ter.1; therefore, that declaration, as added or corrected, referred to under items 1(i) to (v) will **not** be published as part of the international application, and any signed declaration referred to under item 1(iv) is attached. **Such declaration should be submitted by the applicant directly to the designated Office(s) concerned.**
- The applicant's attention is drawn to Rule 51bis.2 which provides that the designated Office shall not, unless it may reasonably doubt the veracity of the declaration concerned, require any document or evidence relating to the subject matter of any declaration complying with Rule 4.17(i) to (iv) which is contained in the request or submitted to the International Bureau or directly to the designated Office. Note, however, that Rule 51bis.2 may not apply in respect of certain States. For further information, see Notes to the request form, Box No. VIII.
- A copy of this notification is being sent to the receiving Office and the International Searching Authority.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Olaiz Alicia e-mail pct.team2@wipo.int Telephone No. +41 22 338 74 02
Facsimile No. +41 22 338 89 65	

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: BRADFORD G. ADDISON
BARNES & THORNBURG LLP
11 SOUTH MERIDIAN STREET
INDIANAPOLIS, IN 46204

PCT

INVITATION TO PAY ADDITIONAL FEES
AND, WHERE APPLICABLE, PROTEST FEE

(PCT Article 17(3)(a) and Rules 40.1 and 40.2(e))

Date of mailing (day/month/year) 22 DEC 2016	
Applicant's or agent's file reference 32251-259113	PAYMENT DUE within ONE MONTH from the above date of mailing
International application No. PCT/US 16/60109	International filing date (day/month/year) 02 November 2016 (02.11.2016)
Applicant TRIMACO, LLC	

1. This International Searching Authority

(i) considers that there are 2 (number of) inventions claimed in the international application covered by the claims indicated below/on an extra sheet:
-- Please See Supplemental Box --

(ii) therefore considers that **the international application does not comply with the requirement of unity of invention** (Rules 13.1, 13.2 and 13.3) for the reasons indicated below/on an extra sheet:
-- Please See Supplemental Box --

(iii) ☐ has carried out a partial international search (see Annex) ☒ will establish the international search report on those parts of the international application which relate to the invention first mentioned in claims Nos.:
1-7

(iv) will establish the international search report on the other parts of the international application only if, and to the extent to which, additional fees are paid.

2. Consequently, the applicant is hereby **invited to pay**, within the time limit indicated above, additional fees in the amount indicated below:

$$\frac{\$2,080}{\text{Fee per additional invention}} \times \frac{1}{\text{number of additional inventions}} = \$2,080 \quad (\text{See Item 2 of annex})$$

total amount of additional fees/currency

3. The applicant is informed that, according to Rule 40.2(c), **the payment of any additional fees may be made under protest**, that is, a reasoned statement to the effect that the international application complies with the requirement of unity of invention or that the amount of the required additional fees is excessive, where applicable, subject to the payment of a protest fee.

Where the applicant pays additional fees under protest, the applicant is hereby invited, within the time limit indicated above, to pay a protest fee (Rule 40.2(e)) in the amount of _____ (amount/currency)

Where the applicant has not, within the time limit indicated above, paid the required protest fee, the protest will be considered not to have been made and the International Searching Authority will so declare.

4. ☐ Claim(s) Nos. _____ have been found to be unsearchable under Article 17(2)(b) because of defects under Article 17(2)(a) and therefore have not been included with any invention.

Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-8300	Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300
---	---

Form PCT/ISA/206 (April 2005)

INVITATION TO PAY ADDITIONAL FEES
AND, WHERE APPLICABLE, PROTEST FEE

International application No.

PCT/US 16/60109

Item 2 (continued). For International Applications filed on or after 01 January 2014, Applicant is reminded that the search fee per additional invention indicated in item 2 is the undiscounted fee per additional invention. An Applicant may pay the search fee per additional invention fee reduced by 50% (small entity assertion) or 75% (micro entity certification), as appropriate. See 37 CFR 1.27 and 1.29.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I: Claims 1-7, drawn to a non-slip mat.

Group II: Claims 8-20, drawn to a method for applying an adhesive coating material on a canvas.

Special Technical Features

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Group II do not require a non-slip mat comprising: a top layer comprising of a woven material, the top layer having a first surface and a second surface; a middle layer comprising of a first synthetic polymer, the middle layer having a third surface and a fourth surface; and a bottom layer comprising of a second synthetic polymer that is different than the first synthetic polymer, the bottom layer having a fifth surface and a sixth surface; and a reinforced outer hem formed on at least one edge of the non-slip mat by folding all the layers of non-slip mat at least once inwardly toward the bottom layer; wherein the bottom layer has a repeated pattern; and wherein the entire second surface of the top layer is bonded to the entire third surface of the middle layer, and the entire fourth surface is bonded to the entire fifth surface of the bottom surface, as required by Group I.

Group I does not require a method for applying an adhesive coating material on a canvas comprising: heating the adhesive coating material to a temperature such that the coating material reaches at least a liquid state; heating at least one roller of an apparatus to apply a uniform thickness of the adhesive coating material; advancing the canvas through the apparatus in a forward direction to contact the at least one heated roller; applying, while advancing the canvas, a uniform coating of the adhesive coating material on a surface of the canvas with the at least one heated roller; and cooling the coated canvas to a room temperature; wherein applying the uniform coating of the adhesive coating material comprises: (i) applying the adhesive coating material on the at least one heated roller, and (ii) contacting the surface of the canvas with the at least one heated roller moving in a direction opposite to the travel of the canvas, as required by Group II.

Shared Common Features

The only feature shared by Groups I and II that would otherwise unify the groups is a woven/canvas material layer. However, this shared technical feature does not represent a contribution over prior art, because the shared technical feature is anticipated by US 2009/0321001 A1 to Dye, et al. (hereinafter 'Dye'). Dye discloses a woven/canvas material layer (para [0005], [0021], [0042]).

As the technical features were known in the art at the time of the invention, this cannot be considered a special technical feature that would otherwise unify the groups.

Groups I and II therefore lack unity under PCT Rule 13 because they do not share a same or corresponding special technical feature.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

NOTIFICATION OF RECEIPT OF SEARCH COPY

(PCT Rule 25.1)

To:

BRADFORD G. ADDISON
BARNES & THORNBURG LLP
11 SOUTH MERIDIAN STREET
INDIANAPOLIS, INDIANA 46204

Date of mailing
(day/month/year)

23 Nov 2016

Applicant's or agent's file reference

32251-259113

IMPORTANT NOTIFICATION

International application No.

PCT/US2016/060109

International filing date (day/month/year)

02 Nov 2016

Priority date (day/month/year)

02 Nov 2015

Applicant

TRIMACO, LLC

1. Where the International Searching Authority and the receiving Office are not the same Office:

The applicant is hereby notified that the search copy of the international application was received by this International Searching Authority on the date indicated below.

Where the International Searching Authority and the receiving Office are the same Office:

The applicant is hereby notified that the search copy of the international application was received on the date indicated below.

02 Nov 2016

(date of receipt)

2. ☐ The search copy was accompanied by a nucleotide and/or amino acid sequence listing in the form of an Annex C/ST.25 text file under PCT Rule 13^{ter}.1(a) for the purposes of international search only.

3. ☐ The search copy contained a nucleotide and/or amino acid sequence listing in the form of an Annex C/ST.25 text file forming part of the international application as filed.

4. Time limit for establishment of international search report and written opinion of the International Searching Authority

The applicant is informed that the time limit for establishing the international search report and the written opinion of the International Searching Authority is three months from the date of receipt indicated above or nine months from the priority date, whichever time limit expires later (Rules 42.1 and 43^{bis}.1(a)).

A copy of this Notification has been sent to the International Bureau and, where the first sentence of paragraph 1 applies, to the receiving Office.

Name and mailing address of the ISA/

Mail Stop PCT, Commissioner for Patents
P.O. Box 1450, Alexandria, VA 22313-1450

Facsimile No. 571-273-8300

Authorized officer

Barbara Bowers

Telephone No. 571-272-2849

PATENT COOPERATION TREATY

From the RECEIVING OFFICE

PCT

To:

BRADFORD G. ADDISON
BARNES & THORNBURG LLP
11 SOUTH MERIDIAN STREET
INDIANAPOLIS, INDIANA 46204

NOTIFICATION CONCERNING PAYMENT OF PRESCRIBED FEES

(PCT Rules 12bis.1(c), 14, 15 and 16
and Administrative Instructions,
Sections 102bis(c), 304, 323(b) and 707)

Date of mailing (day/month/year) 23 Nov 2016		
Applicant's or agent's file reference <div style="text-align: center;">32251-259113</div>	PAYMENT DUE <div style="text-align: center;">see item 3 for time limits</div>	
International application No. <div style="text-align: center;">PCT/US2016/060109</div>	International filing date/Date of receipt (day/month/year) 02 Nov 2016	Priority date (day/month/year) <div style="text-align: center;">02 Nov 2015</div>
Applicant TRIMACO, LLC		

1. The applicant is hereby notified that this receiving Office has received:

- ☒ **the payment** of all the prescribed fees, and
 ☐ **an overpayment**, which will be refunded in due course.
- ☐ **no or insufficient payment** of the prescribed fees and the applicant is hereby **invited to pay the balance due**, as summarized under item 2, within the time limit(s) indicated under item 3.

2. Fees and payment calculation:

2,393.00	—	2,393.00	=	0.00
Total fees payable		Amount paid		Balance

☐ The details of the calculation are given in the Annex.

3. Time limit(s) for payment and amount(s) payable (Rules 14.1, 15.3 and 16.1(f)):

- ☐ within ONE MONTH from the date of receipt of the international application (for the transmittal fee (if any), the search fee and the international filing fee). The amount payable for each fee is the amount applicable on the date of receipt of the international application.
- ☐ within 16 MONTHS from the priority date (only for the fee for priority document). The applicant's attention is drawn to the fact that the request made by the applicant under Rule 17.1(b) will be considered not to have been made unless the fee is paid within that time limit.

4. Additional observations (if necessary):

- ☐ The search copy will not be transmitted to the International Searching Authority until the search fee is paid (therefore the start of the international search will be delayed) (Rule 23.1(a) and (b)).

Name and mailing address of the receiving Office Mail Stop PCT, Commissioner for Patents P.O. Box 1450, Alexandria, VA 22313-1450 Facsimile No. 571-273-8300	Authorized officer <div style="text-align: center;">Barbara Bowers</div> Telephone No. 571-272-2849
---	---

**ANNEX TO FORM PCT/RO/102
CALCULATION OF THE PRESCRIBED FEES**

(If a reduced fee has been applied, the reduced amount is indicated.)

International application No.

PCT/US2016/060109

T Transmittal Fee

Prescribed amount: 120.00 **T**
 Amount paid: 120.00
 Balance: 0.00

☒ correct amount
☐ overpayment
☐ balance due

S Search Fee

Prescribed amount: 1,040.00 **S**
 Amount paid: 1,040.00
 Balance: 0.00

☒ correct amount
☐ overpayment
☐ balance due

I International Filing Fee

Prescribed amount:

Fixed amount for first 30 sheets: 1,158.00 **i1**

$\frac{5}{\text{Number of sheets in excess of 30}} \times \frac{15.00}{\text{Fee per sheet}} = 75.00$ **i2**

(excluding pages referred to in Section 707(a-bis))

Reduction where the international application is filed

(See PCT Fee tables <http://www.wipo.int/pct/en/fees.pdf>):

in electronic form, the request not being in character coded format 0.00 **r**

or

in electronic form, the request being in character coded format 0.00 **r**

or

in electronic form, the request, description, claims and abstract being in character coded format 0.00 **r**

Sub-total: 1,233.00 **i1+i2-r**

Applicants from certain States are entitled to a reduction of 90% of the international filing fee. Where the applicant is (or all applicants are) so entitled, the total to be entered at I is 10% of the sub-total entered at (i1+i2-r); (see Notes to the Fee Calculation Sheet as annexed to the Request Form, PCT/RO/101, for details):

. 1,233.00 **I**
 1,233.00
 0.00

Amount paid:
 Balance:

☒ correct amount
☐ overpayment
☐ balance due

P Fee for Priority Document

Prescribed amount: 0.00 **P**
 Amount paid: 0.00
 Balance: 0.00

☒ correct amount
☐ overpayment
☐ balance due

ES Fee for Earlier Search Documents

Prescribed amount: 0.00 **ES**
 Amount paid: 0.00
 Balance: 0.00

☐ correct amount
☐ overpayment
☐ balance due

PATENT COOPERATION TREATY

From the RECEIVING OFFICE

PCT

NOTIFICATION OF THE INTERNATIONAL APPLICATION NUMBER AND OF THE INTERNATIONAL FILING DATE

(PCT Rule 20.2(c))

To: BRADFORD G. ADDISON BARNES & THORNBURG LLP 11 SOUTH MERIDIAN STREET INDIANAPOLIS, INDIANA 46204		PCT NOTIFICATION OF THE INTERNATIONAL APPLICATION NUMBER AND OF THE INTERNATIONAL FILING DATE (PCT Rule 20.2(c))	
Confirmation No: 1080		Date of mailing <i>(day/month/year)</i> 23 Nov 2016	
Applicant's or agent's file reference 32251-259113		IMPORTANT NOTIFICATION	
International application No. PCT/US2016/060109	International filing date <i>(day/month/year)</i> 02 Nov 2016	Priority date <i>(day/month/year)</i> 02 Nov 2015	
Applicant TRIMACO, LLC			
Title of the invention SLIP-RESISTANT PROTECTIVE MAT			
<p>1. The applicant is hereby notified that the international application has been accorded the international application number and the international filing date indicated above.</p> <p>2. The applicant is further notified that the record copy of the international application:</p> <div style="margin-left: 40px;"> <input checked="" type="checkbox"/> was transmitted to the International Bureau on 23 Nov 2016. </div> <div style="margin-left: 40px;"> <input type="checkbox"/> has not yet been transmitted to the International Bureau for the reason indicated below and a copy of this notification has been sent to the International Bureau*: </div> <div style="margin-left: 80px;"> <input type="checkbox"/> because the necessary national security clearance has not yet been obtained. </div> <div style="margin-left: 80px;"> <input type="checkbox"/> because <i>(reason to be specified)</i>: </div> <p style="margin-top: 20px;">* The International Bureau monitors the transmittal of the record copy by the receiving Office and will notify the applicant (with Form PCT/IB/301) of its receipt. Should the record copy not have been received by the expiration of 14 months from the priority date, the International Bureau will notify the applicant (Rule 22.1(c)).</p>			
<p>3. FOREIGN TRANSMITTAL LICENSE INFORMATION Completed by: <u>BB</u></p> <div style="margin-left: 40px;"> <input type="checkbox"/> Additional license for foreign transmittal not required. This subject matter is covered by a license already granted or the equivalent U.S. national application. Refer to that license for information concerning its scope. </div> <div style="margin-left: 40px;"> <input type="checkbox"/> License for foreign transmittal not required. 37 CFR. 5.11(e)(1) or 37 CFR 5.11(e)(2). However, a license may be required for additional subject matter. See 37 CFR 5.15(b). </div> <div style="margin-left: 40px;"> <input checked="" type="checkbox"/> Foreign transmittal license granted. 35 U.S.C. 184; 37 CFR 5.11 on 22 Nov 2016 : </div> <div style="margin-left: 80px; margin-top: 5px;"> <input type="checkbox"/> 37 CFR 5.15(a) <input checked="" type="checkbox"/> 37 CFR 5.15(b) (date) </div>			
Name and mailing address of the receiving Office Mail Stop PCT, Commissioner for Patents P.O. Box 1450, Alexandria, VA 22313-1450 Facsimile No. 571-273-8300		Authorized officer Barbara Bowers Telephone No. 571-272-2849	

32251-259113

1/6

PCT REQUESTOriginal (for **SUBMISSION**)

0	For receiving Office use only	
0-1	International Application No.	PCT/US16/60109
0-2	International Filing Date	02 NOV 2016 (02.11.2016)
0-3	Name of receiving Office and "PCT International Application"	RO/US
0-4	Form PCT/RO/101 PCT Request	
0-4-1	Prepared Using	PCT-SAFE [EFS-Web mode] Version 3.51.075.251 MT/FOP 20161001/0.20.5.24
0-5	Petition The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty	
0-6	Receiving Office (specified by the applicant)	United States Patent and Trademark Office (USPTO) (RO/US)
0-7	Applicant's or agent's file reference	32251-259113
I	Title of Invention	SLIP-RESISTANT PROTECTIVE MAT
II	Applicant	
II-1	This person is	Applicant only
II-2	Applicant for	All designated States
II-4	Name	TRIMACO, LLC
II-5	Address	2300 Gateway Centre Blvd. Suite 200 Morrisville, North Carolina 27560-9699 United States of America
II-6	State of nationality	US
II-7	State of residence	US
II-8	Telephone No.	(800) 334-1625
III-1	Applicant and/or inventor	
III-1-1	This person is	Inventor only
III-1-3	Inventor for	All designated States
III-1-4	Name (LAST, First)	MAY, David C.
III-1-5	Address	4 Chancery Place Durham, North Carolina 27707 United States of America

32251-259113

2/6

PCT REQUESTOriginal (for **SUBMISSION**)

III-2	Applicant and/or inventor	
III-2-1	This person is	Inventor only
III-2-3	Inventor for	All designated States
III-2-4	Name (LAST, First)	WANG, Yichen
III-2-5	Address	407 Five Pine Court Mebane, Indiana 27302 United States of America
III-3	Applicant and/or inventor	
III-3-1	This person is	Inventor only
III-3-3	Inventor for	All designated States
III-3-4	Name (LAST, First)	KHER, Akashdeep
III-3-5	Address	2300 Gateway Center Blvd. Suite 200 Morrisville, North Carolina 27560 United States of America
IV-1	Agent or common representative; or address for correspondence	
	The person identified below is hereby/ has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:	Agent
IV-1-1	Name (LAST, First)	ADDISON, Bradford G.
IV-1-2	Address	BARNES & THORNBURG LLP 11 South Meridian Street Indianapolis, Indiana 46204 United States of America
IV-1-3	Telephone No.	(317) 236-1313
IV-1-4	Facsimile No.	(317) 231-7441
IV-1-5	e-mail	INDOCKET@BTLAW.COM
IV-1-5(a))	E-mail authorization The receiving Office, the International Searching Authority, the International Bureau and the International Preliminary Examining Authority are authorized to use this e-mail address, if the Office or Authority so wishes, to send notifications issued in respect of this international application:	exclusively in electronic form (no paper notifications will be sent)
IV-1-6	Agent's registration No.	41486
V	DESIGNATIONS	
V-1	The filing of this request constitutes under Rule 4.9(a), the designation of all Contracting States bound by the PCT on the international filing date, for the grant of every kind of protection available and, where applicable, for the grant of both regional and national patents.	

32251-259113

3/6

PCT REQUESTOriginal (for **SUBMISSION**)

VI-1	Priority claim of earlier national application		
VI-1-1	Filing date	02 November 2015 (02.11.2015)	
VI-1-2	Number	62/249,806	
VI-1-3	Country or Member of WTO	US	
VI-2	Priority document request		
	The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s):	VI-1	
VI-3	Incorporation by reference :		
	where an element of the international application referred to in Article 11(1)(iii)(d) or (e) or a part of the description, claims or drawings referred to in Rule 20.5(a) is not otherwise contained in this international application but is completely contained in an earlier application whose priority is claimed on the date on which one or more elements referred to in Article 11(1)(iii) were first received by the receiving Office, that element or part is, subject to confirmation under Rule 20.6, incorporated by reference in this international application for the purposes of Rule 20.6.		
VII-1	International Searching Authority Chosen	United States Patent and Trademark Office (USPTO) (ISA/US)	
VIII	Declarations	Number of declarations	
VIII-1	Declaration as to the identity of the inventor	—	
VIII-2	Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent	1	
VIII-3	Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application	1	
VIII-4	Declaration of inventorship (only for the purposes of the designation of the United States of America)	—	
VIII-5	Declaration as to non-prejudicial disclosures or exceptions to lack of novelty	—	

32251-259113

4/6

PCT REQUEST

Original (for SUBMISSION)

VIII-2-1	Declaration: Entitlement to apply for and be granted a patent Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent (Rules 4.17(ii) and 51bis.1(a)(ii)), in a case where the declaration under Rule 4.17(iv) is not appropriate: Name (LAST, First)	In relation to this international application TRIMACO, LLC is entitled to apply for and be granted a patent by virtue of the following:
VIII-2-1(i v)		an assignment from MAY, David C. to TRIMACO, LLC, dated 01 November 2016 (01.11.2016)
VIII-2-1(i v)		an assignment from WANG, Yichen to TRIMACO, LLC, dated 01 November 2016 (01.11.2016)
VIII-2-1(i v)		an assignment from KHER, Akashdeep to TRIMACO, LLC, dated 01 November 2016 (01.11.2016)

32251-259113

5/6

PCT REQUEST

Original (for SUBMISSION)

VIII-3-1	Declaration: Entitlement to claim priority Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application specified below, where the applicant is not the applicant who filed the earlier application or where the applicant's name has changed since the filing of the earlier application (Rules 4.17(iii) and 51bis.1(a)(iii)) Name	In relation to this international application TRIMACO, LLC is entitled to claim priority of earlier application No. 62/249,806 by virtue of the following:
VIII-3-1(i v)		an assignment from MAY, David C. to TRIMACO, LLC, dated 01 November 2016 (01.11.2016)
VIII-3-1(i v)		an assignment from WANG, Yichen to TRIMACO, LLC, dated 01 November 2016 (01.11.2016)

32251-259113

6/6

PCT REQUESTOriginal (for **SUBMISSION**)

IX	Check list	Number of sheets	Electronic file(s) attached
IX-1	Request (including declaration sheets)	6	✓
IX-2	Description	20	—
IX-3	Claims	5	—
IX-4	Abstract	1	✓
IX-5	Drawings	3	—
IX-7	TOTAL	35	
Accompanying Items		Paper document(s) attached	Electronic file(s) attached
IX-8	Fee calculation sheet	✓	—
IX-20	Figure of the drawings which should accompany the abstract	Fig. 1	
IX-21	Language of filing of the international application	English	
X-1	Signature of applicant, agent or common representative	/Bradford G. ADDISON, Reg. No. 41486/	
X-1-1	Name (LAST, First)	ADDISON, Bradford G.	
X-1-3	Capacity (if such capacity is not obvious from reading the request)		

FOR RECEIVING OFFICE USE ONLY

10-1	Date of actual receipt of the purported international application	02 NOV 2016 (02.11.2016)
10-2	Drawings:	
10-2-1	Received <input checked="" type="checkbox"/>	
10-2-2	Not received	
10-3	Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application	
10-4	Date of timely receipt of the required corrections under PCT Article 11(2)	
10-5	International Searching Authority	ISA/US
10-6	Transmittal of search copy delayed until search fee is paid	

FOR INTERNATIONAL BUREAU USE ONLY

11-1	Date of receipt of the record copy by the International Bureau	
-------------	---	--

32251-259113

1/2

PCT (ANNEX - FEE CALCULATION SHEET)

Original (for SUBMISSION)
(This sheet is not part of and does not count as a sheet of the international application)

0	For receiving Office use only	PCT/US16/60109		
0-1	International Application No.			
0-2	Date stamp of the receiving Office	02 NOV 2016 (02.11.2016)		
0-4	Form PCT/RO/101 (Annex) PCT Fee Calculation Sheet			
0-4-1	Prepared Using	PCT-SAFE [EFS-Web mode] Version 3.51.075.251 MT/FOP 20161001/0.20.5.24		
0-9	Applicant's or agent's file reference	32251-259113		
2	Applicant	TRIMACO, LLC		
12	Calculation of prescribed fees	Fee amount/multiplier	Total amounts (USD)	
12-1	Transmittal fee T	⇔	120	
12-2-1	Search fee S	⇔	1040	
12-2-2	International search to be carried out by	US		
12-3	International filing fee (first 30 sheets) i1	1363		
12-4	Remaining sheets	5		
12-5	Additional amount (X)	15		
12-6	Total additional amount i2	75		
12-7	i1 + i2 = i	1438		
12-12	Electronic Filing reduction (Image) R	-205		
12-13	Total International filing fee (i-R) I	⇔	1233	
12-14	Fee for priority document Number of priority documents requested	1		
12-15	Fee per document (X)	0		
12-16	Total priority document fee: P	⇔		
12-17	Fee for restoration of priority rights RP Number of requests for restoration of priority rights	0		
	Total amount of fees for restoration of priority rights			
12-19	TOTAL FEES PAYABLE (T+S+I+P+RP)	⇔	2393	

32251-259113

2/2

PCT (ANNEX - FEE CALCULATION SHEET)

Original (for SUBMISSION)

(This sheet is not part of and does not count as a sheet of the international application)

12-21	Mode of payment	Authorization to charge deposit or current account
12-22	Deposit or current account instructions The receiving Office	United States Patent and Trademark Office (USPTO) (RO/US)
12-22-1	Authorization to charge the total fees indicated above	✓
12-22-2	Authorization to charge any deficiency or credit any overpayment in the total fees indicated above	✓
12-22-3	Authorization to charge the fee for priority document	✓
12-23	Deposit or current account No.	10-0435
12-24	Date	02 November 2016 (02.11.2016)
12-25	Name and signature	BRADFORD G. ADDISON, /Bradford G. ADDISON, Reg. No. 41486/

SLIP-RESISTANT PROTECTIVE MAT

[0001] This application claims priority 35 U.S.C. § 119 to U.S. Prov. App. No. 62/249,806 filed November 2, 2015, entitled “SLIP-RESISTANT PROTECTIVE MAT,” the entirety of each of which is incorporated herein by reference in its entirety.

TECHNICAL FIELD

[0002] The present invention generally relates to a slip-resistant sheet or drop cloth used to protect an object, surface, or the like. The present invention particularly relates to a method of coating a drop cloth with an adhesive coating material to prevent the drop cloth from slipping.

BACKGROUND

[0003] In general, painters use drop cloths to protect surfaces while painting. For example, drop cloths are used to absorb spilled, splattered, or over-sprayed paint. Drop cloths may be used to protect any working surface, including, but not limited to, floors, furniture, counters, and stairs. However, the working surface may not provide enough resistance to prevent the drop cloth from slipping, thereby increasing the painters’ risk of falls.

SUMMARY

[0004] According to one aspect of the present disclosure, a non-slip mat comprises a top layer, a middle layer, a bottom layer, and a reinforced outer hem. The top layer is comprised of a woven material and has a first surface and a second surface. The middle layer is comprised of a first synthetic polymer and has a third surface and a fourth surface. The bottom layer is

comprised of a second synthetic polymer that is different than the first synthetic polymer and has a fifth surface and a sixth surface. The reinforced outer hem is formed on at least one edge of the non-slip mat by folding all the layers of non-slip mat at least once inwardly toward the bottom layer. The bottom layer has a repeated pattern. The entire second surface of the top layer is bonded to the entire third surface of the middle layer, and the entire fourth surface is bonded to the entire fifth surface of the bottom surface.

[0005] In some embodiments, the top layer is made of a woven material having a weight from about 6 ounces per square yard to about 8 ounces per square yard.

[0006] In some embodiments, the middle layer is made of a low-density polyethylene (LDPE).

[0007] In some embodiments, the bottom layer is made of PVC resin and polyester mesh.

[0008] In some embodiments, the PVC resin and polyester mesh of the bottom layer forms a webbed network, the webbed network comprises a series of nodes in a repeating alignment.

[0009] In some embodiments, the bottom layer comprises one or more nodes forming a webbed network, the webbed network has an average column number density of nodes from about 90 to about 110 nodes per square inch.

[0010] In some embodiments, the top layer, the middle layer, and the bottom layer are bonded through a lamination process.

[0011] According to another aspect of the present disclosure, a method for applying an adhesive coating material on a canvas comprises: (i) heating

the adhesive coating material to a temperature such that the coating material reaches at least a liquid state; (ii) heating at least one roller of an apparatus to apply a uniform thickness of the adhesive coating material; (iii) advancing the canvas through the apparatus in a forward direction to contact the at least one heated roller; (iv) applying, while advancing the canvas, a uniform coating of the adhesive coating material on a surface of the canvas with the at least one heated roller; and (v) cooling the coated canvas to a room temperature. The step of applying the uniform coating of the adhesive coating material comprises: (i) applying the adhesive coating material on the at least one heated roller, and (ii) contacting the surface of the canvas with the at least one heated roller moving in a direction opposite to the travel of the canvas.

[0012] In some embodiments, the step of heating the adhesive coating material comprises heating the adhesive coating material to the temperature ranging from about 180°C to about 190°C.

[0013] In some embodiments, the step of heating at least one roller of the apparatus comprises heating the roller to the temperature ranging from about 180°C to about 220°C.

[0014] In some embodiments, the adhesive coating material is a slip resistance material that increases a frictional force.

[0015] In some embodiments, the adhesive coating material is styrene ethylene butylene styrene (SEBS).

[0016] In some embodiments, the canvas is made of cotton.

[0017] In some embodiments, the canvas is made of polyester.

[0018] In some embodiments, the canvas is made of cotton and polyester blend.

[0019] In some embodiments, the uniform thickness of the adhesive coating material is about 1% of a thickness of the canvas.

[0020] In some embodiments, the uniform thickness of the adhesive coating material is about 1.5% of a thickness of the canvas.

[0021] In some embodiments, the uniform thickness of the adhesive coating material ranges from about 1% to about 1.5% of a thickness of the canvas.

[0022] In some embodiments, the step of applying the uniform coating of the adhesive coating material comprises applying the adhesive coating material on the at least one heated roller.

[0023] In some embodiments, the step of applying the uniform coating of the adhesive coating material comprises applying a predetermined amount of the adhesive coating material on the canvas.

[0024] According to another aspect of the present disclosure, a mat comprises a first layer, a second layer, and a third layer. The first layer consists of a woven material and is connected to the second layer and the third layer. The second layer consists of a first synthetic polymer and is connected to the first layer and third layer. The third layer consists of a second synthetic polymer. The second synthetic polymer is different from the first synthetic polymer. The third layer is connected to the first layer and the second layer.

[0025] In some embodiments, the first layer is a woven material having a weight from about 6 ounces per square yard to about 8 ounces per square yard.

[0026] In some embodiments, the second layer is a low-density polyethylene.

[0027] In some embodiments, the third layer comprises PVC resin and polyester mesh.

[0028] In some embodiments, the PVC resin and polyester mesh form a webbed network, and wherein the webbed network comprises a series of nodes in a repeating alignment.

[0029] In some embodiments, the third layer comprises one or more nodes forming a webbed network. The webbed network has an average column number density of nodes from about 90 to about 110 nodes per square inch.

[0030] In some embodiments, the static coefficient of friction is from about 1.37 to about 2.00.

[0031] In some embodiments, the kinetic coefficient of friction is from about 1.30 to about 1.94.

[0032] In some embodiments, the first layer, the second layer, and the third layer are connected through a first process and a second process that is different from the first process.

[0033] In some embodiments, the first process is lamination and the second process is stitching.

[0034] In some embodiments, the lamination process includes an adhesive material.

BRIEF DESCRIPTION OF THE DRAWINGS

[0035] The detailed description particularly refers to the following figures, in which:

[0036] FIG. 1 is a simplified cross-sectional view of the slip-resistant, multi-layered mat;

[0037] FIG. 2 is a bottom plan view of the slip-resistant, multi-layered mat of FIG. 1 with a ruler shown for reference;

[0038] FIG. 3 is a cross-sectional view of a slip-resistant protective sheet; and

[0039] FIG. 4 is a simplified flow diagram of at least one embodiment of a method for producing the slip-resistant protective sheet of FIG. 3.

DETAILED DESCRIPTION OF THE DRAWINGS

[0040] While the concepts of the present disclosure are susceptible to various modifications and alternative forms, specific exemplary embodiments thereof have been shown by way of example in the drawings and will herein be described in detail. It should be understood, however, that there is no intent to limit the concepts of the present disclosure to the particular forms disclosed, but on the contrary, the intention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the invention as defined by the appended claims.

[0041] Referring now to FIG. 1, a cross-sectional view of the slip-resistant protective sheet 10 is shown. In the illustrative embodiment, the slip-resistant protective sheet 10 includes a top layer 12, a middle layer 14, and a bottom layer 16. It should be appreciated that, in some embodiments, the slip-resistant protective sheet 10 may include only a top layer 12 and a bottom layer 16. In the illustrative embodiment, the top layer 12 is an absorbent layer, the middle layer 14 is an impermeable layer, and the bottom layer 16 is a slip-resistant layer. For example, the slip-resistant protective sheet 10 may be used by painters to protect a floor or other surfaces while painting. In use, the absorbent top layer 12 is configured to absorb any liquid, such as paint, that was spilled on the slip-resistant protective sheet 10 to reduce the risk of slipping. The impermeable middle layer 14 is configured to protect against liquid or other debris penetrating through the slip-resistant protective sheet 10 and damaging underlying surfaces. The slip resistant bottom layer 16 is configured to reduce the risk of slipping caused by movement from stepping on the slip-resistant protective sheet 10. The bottom layer 16 allows the slip-resistant protective sheet 10 to remain stationary while being draped over furniture, stairs, and other surfaces, without the application of additional force across the top layer 12. The slip-resistant protective sheet 10 is configured to be light weight and thin. In some embodiments, the slip-resistant protective sheet 10 is less than about 6 ounces per square yard and less than about 0.1 centimeters thick.

[0042] In the illustrative embodiment, the top layer 12 is a woven material. The woven material may be a plain weave or a twill weave material.

The woven material may be, for example, plain canvas, duck canvas, or any similarly absorbent material. In one embodiment, the woven material may have a yarn count of about 9.0 to about 9.5s. In another embodiment, the woven material may be about 40 warps per inch. In another embodiment, the woven material may be from about 40 warps per inch to about 45 warps per inch. In another embodiment, the woven material may be from about 35 warps per inch to about 50 warps per inch. In another embodiment, the woven material may be from about 25 wefts per inch to about 28 wefts per inch. In another embodiment, the woven material may be from about 18 wefts per inch to about 25 wefts per inch. In another embodiment, the woven material may be from about 28 wefts per inch to about 35 wefts per inch. In some embodiments, the woven material may be comprised of 55% cotton and 45% polyester. In some embodiments, the woven material may be a canvas having a weight of about 6 ounces per square yard. In other embodiments, the woven material may be a canvas having a weight from about 4 ounces per square yard to about 10 ounces per square yard.

[0043] In the illustrative embodiment, the impermeable middle layer 14 is made of a synthetic polymer. The synthetic polymer may be a low-density polyethylene (LDPE). In the illustrative embodiment, the middle layer 14 has a thickness ranging from about 18 micrometers to about 20 micrometers. In another embodiment, the middle layer 14 may have a thickness from about 10 micrometers to about 30 micrometers. As discussed above, in some embodiments, the slip-resistant protective sheet 10 may not have a middle layer 14.

[0044] In the illustrative embodiment, the bottom layer 16 is a slip-resistant layer comprised of a synthetic polymer. In one embodiment, the synthetic polymer may be a polyvinyl chloride (PVC) foam. In another embodiment the bottom layer 16 may be comprised of a mixture of PVC resin and polyester mesh. In the illustrative embodiment, the bottom layer 16 comprises about 97% PVC resin and about 3% polyester mesh. In one embodiment, the density of the bottom layer 16 is about 180 to about 200 grams per square meter (GSM). In another embodiment, the density of the bottom layer 16 is from about 100 to about 300 GSM. In another embodiment, the synthetic polymer of the bottom layer 16 may include one or a combination of polyurethane, latex, styrene-butadiene rubber, ethylene vinyl acetate, and/or a halogenated vinyl. In another embodiment, the bottom layer 16 may have a thickness ranging from about 0.3 millimeters to about 0.6 millimeters. In another embodiment, the thickness of the bottom layer 16 may range from about 0.01 millimeters to about 1.5 millimeters.

[0045] The top layer 12 is bonded to the middle layer 14 and the middle layer 14 is bonded to the bottom layer 16. In one embodiment, the top layer 12 may be folded back on itself to be bonded to the bottom layer 16. In some embodiments, the top layer 12 is bonded to the middle layer 14 and the middle layer is bonded to the bottom layer 16 by means of lamination. In one embodiment, the lamination process may include an adhesive material. In another embodiment, the lamination process may be performed by means of a heating process. In another embodiment, the lamination process may be performed by means of a pressure sensitive process. The bonding of all

layers, including any seams, may be connected through stitching or by forming reinforced hems on at least one edge of the slip-resistant protective sheet 10. The reinforced hem 24 is formed at the edge of the slip-resistant protective sheet 10 by folding all layers of slip-resistant protective sheet 10 at least once such that the top layer 12 is disposed on both top and bottom surfaces. In some embodiments, the slip-resistant protective sheet 10 may be folded more than once to form the reinforced hem 24. The outer hem 24 may be reinforced by stitching the folded layers and/or reinforced with an adhesive material.

[0046] Referring now to Figure 2, the bottom layer 16 comprises a series of nodes 18 forming a webbed network 20. For purposes of disclosure, a node 18 is a continuous unit of synthetic polymer extending around a void 22. The void 22 is encompassed by a node 18. In the illustrative embodiment, the nodes 18 align in a repeated pattern. In other embodiments, the nodes 18 may be arranged in a random fashion. In the illustrative embodiment, the nodes 18 have an average column number density of about 100 nodes per square inch. In some embodiments, the average column number density of nodes may be from about 75 nodes to about 125 nodes per square inch.

[0047] Standard testing was performed to determine the coefficient of static and kinetic friction of the slip-resistant protective sheet 10 on various surfaces, for example, wood laminate, ceramic tile, and carpet. American Society for Testing and Material (ASTM) D1894-14 Static and Kinetic Coefficient of Friction of Plastic Film and Sheeting test procedures are incorporated herein by reference. The TAPPI T548 standard test procedures

are incorporated herein by reference. Additional methods to measure coefficients of friction are contemplated.

[0048] The static and kinetic coefficients of friction of the bottom layer 16 measured by ASTM D1894-14 on wood laminate is shown in TABLE 1.

TABLE 1.

Material ID	Test Number	Static Load (g)	Sled Weight (g)	Static Coefficient Of Friction	Kinetic Load (g)	Sled Weight (g)	Kinetic Coefficient Of Friction
Sample # 1 Uncoated Canvas (Tested Material ID side)	1	91.1	200.0	0.456	85.1	200.0	0.426
	2	91.2	200.0	0.456	86.2	200.0	0.431
	3	93.3	200.0	0.467	87.4	200.0	0.437
	4	104	200.0	0.520	87.0	200.0	0.435
	5	95.7	200.0	0.479	85.4	200.0	0.427
Average				0.475			0.431
Std. Dev.				0.027			0.0050
Sample # 3 PVC Coated Canvas (Tested White Foam side)	1	361	200.0	1.81	282	200.0	1.41
	2	375	200.0	1.88	308	200.0	1.54
	3	400	200.0	2.00	331	200.0	1.66
	4	400	200.0	2.00	326	200.0	1.63
	5	361	200.0	1.81	334	200.0	1.67
Average				1.90			1.58
Std. Dev.				0.098			0.11

[0049] Sample #1 represents an uncoated canvas having only the top layer 12. Sample #3 represents the slip-resistant protective sheet 10 having the PVC coated bottom layer 16. As shown in TABLE 1, Sample #3 has higher coefficient of both the static and kinetic friction compared to Sample #1. The coefficient of static friction is the friction force between two objects when

neither of the objects is moving. The coefficient of kinetic friction is the force between two objects when one object is moving, or if two objects are moving against each other. For example, the static coefficient of friction of Sample #1 measured on wood laminate ranges from about 0.456 to about 0.520, and the average static coefficient of friction is about 0.475. Whereas, the static coefficient of friction of Sample #3 measured on wood laminate ranges from about 1.81 to about 2.00, and the average static coefficient of friction is about 1.90. Additionally, the kinetic coefficient of friction of Sample #1 measured on wood laminate ranges from about 0.426 to about 0.437, and the average kinetic coefficient of friction is about 0.431. Whereas, the kinetic coefficient of friction of Sample #3 measured on wood laminate ranges from about 1.41 to about 1.67, and the average kinetic coefficient of friction is about 1.58.

[0050] The static and kinetic coefficients of friction of the bottom layer 16 measured by ASTM D1894-14 on ceramic tile is shown in TABLE 2.

TABLE 2.

Material ID	Test Number			Static			Kinetic		Kinetic
		Static Load (g)	Sled Weight (g)	Coefficient Of Friction	Kinetic Load (g)	Sled Weight (g)	Coefficient Of Friction		
Sample # 1 Uncoated Canvas (Tested Material ID side)	1	79.2	200.0	0.396		73.7	200.0	0.369	
	2	74.2	200.0	0.371		71.7	200.0	0.359	
	3	72.7	200.0	0.364		66.9	200.0	0.335	
	4	72.5	200.0	0.364		65.0	200.0	0.325	
	5	70.6	200.0	0.353		61.9	200.0	0.310	
	Average			0.370				0.339	
	Std. Dev.			0.016				0.024	

Sample # 3	1	377	200.0	1.89	259	200.0	1.30
PVC Coated Canvas	2	316	200.0	1.58	318	200.0	1.59
(Tested White Foam side)	3	347	200.0	1.74	349	200.0	1.75
	4	376	200.0	1.88	368	200.0	1.84
	5	378	200.0	1.89	388	200.0	1.94
	Average			1.79			1.68
	Std. Dev.			0.14			0.25

[0051] Similar to TABLE 1, Sample #1 represents an uncoated canvas having only the top layer 12. Sample #3 represents the slip-resistant protective sheet 10 having the PVC coated bottom layer 16. As shown in TABLE 2, Sample #3 has higher coefficient of both the static and kinetic friction compared to Sample #1. For example, the static coefficient of friction of Sample #1 measured on ceramic tile ranges from about 0.353 to about 0.396, and the average static coefficient of friction is about 0.370. Whereas, the static coefficient of friction of Sample #3 measured on ceramic tile ranges from about 1.58 to about 1.89, and the average static coefficient of friction is about 1.79. Additionally, the kinetic coefficient of friction of Sample #1 measured on ceramic tile ranges from about 0.310 to about 0.369, and the average kinetic coefficient of friction is about 0.339. Whereas, the kinetic coefficient of friction of Sample #3 measured on ceramic tile ranges from about 1.30 to about 1.94, and the average kinetic coefficient of friction is about 1.68.

[0052] The static and kinetic coefficients of friction of the bottom layer 16 measured by ASTM D1894-14 on carpet is shown in TABLE 3.

TABLE 3.

Material ID	Test Number	Static Load (g)	Sled Weight (g)	Static Coefficient Of Friction	Kinetic Load (g)	Sled Weight (g)	Kinetic Coefficient Of Friction
Sample # 1 Uncoated Canvas (Tested Material ID side)	1	139	200.0	0.695	120	200.0	0.600
	2	161	200.0	0.805	137	200.0	0.685
	3	157	200.0	0.785	142	200.0	0.710
	4	152	200.0	0.760	132	200.0	0.660
	5	170	200.0	0.850	130	200.0	0.650
	Average			0.779			0.661
	Std. Dev.			0.057			0.041
Sample # 3 PVC Coated Canvas (Tested White Foam side)	1	273	200.0	1.37	280	200.0	1.40
	2	303	200.0	1.52	293	200.0	1.47
	3	300	200.0	1.50	309	200.0	1.55
	4	320	200.0	1.60	331	200.0	1.66
	5	306	200.0	1.53	319	200.0	1.60
	Average			1.50			1.53
	Std. Dev.			0.086			0.10

[0053] Sample #1 represents an uncoated canvas having only the top layer 12. Sample #3 represents the slip-resistant protective sheet 10 having the PVC coated bottom layer 16. As shown in TABLE 3, Sample #3 has higher coefficient of both the static and kinetic friction compared to Sample #1. For example, the static coefficient of friction of Sample #1 measured on carpet ranges from about 0.695 to about 0.850, and the average static coefficient of friction is about 0.779. Whereas, the static coefficient of friction of Sample #3 measured on carpet ranges from about 1.37 to about 1.60, and the average static coefficient of friction is about 1.50. Additionally, the kinetic coefficient

of friction of Sample #1 measured on carpet ranges from about 0.600 to about 0.710, and the average kinetic coefficient of friction is about 0.661. Whereas, the kinetic coefficient of friction of Sample #3 measured on carpet ranges from about 1.40 to about 1.66, and the average kinetic coefficient of friction is about 1.53.

[0054] TABLES 1-3 illustrate that the slip-resistant protective sheet 10 having the PVC coated bottom layer 16 improves the non-slip property of the sheet 10, which reduces a risk of slipping when working on the slip-resistant protective sheet 10.

[0055] Referring to FIG. 3, a cross-section of a slip-resistant protective cover or sheet 110 is shown. The slip-resistant protective sheet 110 includes a protective sheet 112 and a slip-resistant coating layer 114. The protective sheet 112 has a top surface 116 and a bottom surface 118, which is coated with an adhesive coating material to form the slip-resistant coating layer 114 to increase a frictional force.

[0056] The slip-resistant protective sheet 110 is used to protect a floor or other surfaces in the work environment, and the slip-resistant coating layer 114 provides a slip-resistance surface to reduce workers' chances of falls and helps to hold the slip-resistant protective sheet 110 in place. For example, painters may use the slip-resistant protective sheet 110 to protect the floor or other surfaces while painting. The slip-resistant coating layer 114 of the slip-resistant protective sheet 110 reduces a risk of slipping when working on the slip-resistant protective sheet 110.

[0057] The protective sheet 112 may be made of a blend of cotton and polyester. In one embodiment, the protective sheet 112 may be comprised of about 70% cotton and about 30% polyester. In some embodiments, the protective sheet 112 may be a woven material. The woven material may be a plain weave or a twill weave material. The woven material may be, for example, plain canvas, duck canvas, or any similarly absorbent material. In some embodiments, the protective sheet 112 may be made solely from cotton or polyester. It should be appreciated that, in some embodiments, the protective sheet 112 may include a multiple layers. In such embodiment, each layer may be made of a different material.

[0058] In the illustrative embodiment, the adhesive coating material to form the slip-resistant coating layer 114 is styrene ethylene butylene styrene (SEBS). However, it should be appreciated that, in other embodiments, the adhesive coating material may be a mixture of elastomeric polymers or other materials that increase a frictional force to provide a slip resistance.

[0059] In use, the adhesive coating material is placed on the protective sheet 112 using a coating apparatus (not shown). The coating apparatus includes a container, a main roller, a carried roller, and a conveyor belt. In the illustrative embodiment, the container is positioned above the conveyor belt, and the main roller and the carried roller are positioned between the container and the conveyor belt. The adhesive coating material is placed in the container and is heated to a predefined temperature, at which the adhesive coating material is in its liquid state and has an appropriate viscosity for best slip resistance properties to form the slip-resistant coating layer 114

of the slip-resistant protective sheet 110. Depending on the selected adhesive coating material, the range of appropriate viscosity is determined. For example, in the illustrative embodiment, when SEBS reaches a temperature between about 180°C to about 190°C, SEBS is in its liquid state and has appropriate viscosity for best slip resistance properties to form the slip-resistant coating layer 114. The container is configured to discharge a predetermined amount of adhesive coating material to be applied on the protective sheet 112. The conveyor belt is configured to carry the protective sheet 112 through the coating apparatus in a forward direction while the adhesive coating material is applied on the protective sheet 112.

[0060] The adhesive coating material is uniformly applied using the main and carried rollers. To do so, the main roller is heated to about 220°C to maintain appropriate viscosity properties of the adhesive coating material throughout its application on the protective sheet 112. In some embodiments, the main roller may be heated to a temperature between about 180°C to about 220°C. It should be appreciated that the main roller and the carried roller are positioned side-by-side contacting one another, such that the heat from the main roller may be transferred to the carried roller via conduction. In such embodiment, the adhesive coating material is discharged from the container onto the heated main roller and subsequently transferred to the carried roller. Both the main roller and the carried roller are in contact with the protective sheet 112, which is fed underneath the main and carried rollers.

[0061] It should be appreciated that, in some embodiments, both the main roller and the carried roller may be heated to a desired temperature. In

some embodiments, the main roller and carried roller may be positioned side-by-side without contacting one another, such that the main roller is configured to apply the adhesive coating material on the protective sheet 112, and the carried roller is configured to uniformly spread out the applied adhesive coating material on the protective sheet 112.

[0062] The adhesive coating material is uniformly applied on the protective sheet 112 to form the slip-resistant coating layer 114. In the illustrated embodiment, the uniform thickness of the slip-resistant coating layer 114 is about 1% of a thickness of the protective sheet 112. It should be appreciated that, in some embodiments, the thickness of the slip-resistant coating layer 114 may be between about 1% to about 1.5% of the thickness of the protective sheet 112.

[0063] Referring now to FIG. 4, the adhesive coating material is applied using a method 200. The method 200 begins with block 202 in which the adhesive coating material and the main roller of the coating apparatus are heated by the coating apparatus. The adhesive coating material is heated by heating the container of the coating apparatus. If the adhesive coating material is determined to be heated to a temperature between about 180°C to about 190°C in block 204, the method 200 advances to block 206. If not, the method 200 loops back to block 204 to continue to monitor for the temperature of the adhesive coating material to reach between about 180°C to about 190°C. In block 206, the temperature of the main roller of the coating apparatus is examined to further determine whether the main roller has reached a temperature between about 180°C to about 220°C. If not, the

method 200 loops back to block 206 to continue to monitor for the temperature of the main roller to reach between about 180°C to about 220°C. If the main roller has reached the temperature between about 180°C to about 220°C, the method 200 advances to block 208 to determine whether the protective sheet 112 has been fed into the coating apparatus via the conveyor belt. If not, the method 200 loops back to block 208 to continue to monitor for the protective sheet 112 to be fed into the coating apparatus. If the protective sheet 112 is detected on the coating apparatus, the method 200 advances to block 210.

[0064] In block 210, the heated adhesive coating material is discharged from the container onto the heated main roller. Simultaneously, the protective sheet 112 advances through the coating apparatus in a forward direction, such that the top surface 116 of the protective sheet 112 is facing the conveyor belt, and the bottom surface 118 of the protective sheet 112 contacts both the main roller and the carried roller. As a result, the adhesive coating material is uniformly applied on the bottom surface 118 of the protective sheet 112 using the main and carried rollers. It should be noted that at least one of the main and carried rollers is moving in a direction opposite to the travel of the protective sheet 112.

[0065] The thickness of the slip-resistant coating layer 114 is about 1% of a thickness of the protective sheet 112. As described above, in some embodiments, the thickness of the slip-resistant coating layer 114 may be between about 1% to about 1.5% of a thickness of the protective sheet 112.

[0066] Once a uniform layer of the slip-resistant coating layer 114 is formed on the protective sheet 112, the resulting slip-resistant protective sheet 110 is removed from the conveyor belt of the coating apparatus and cooled down to room temperature. Once the slip-resistant protective sheet 110 is cooled down to room temperature, the slip-resistant protective sheet 110 may be cut into a predetermined size.

[0067] While the disclosure has been illustrated and described in detail in the drawings and foregoing description, such an illustration and description is to be considered as exemplary and not restrictive in character, it being understood that only illustrative embodiments have been shown and described and that all changes and modifications that come within the spirit of the disclosure are desired to be protected.

[0068] There exist a plurality of advantages of the present disclosure arising from the various features of the apparatus, system, and method described herein. It will be noted that alternative embodiments of the apparatus, system, and method of the present disclosure may not include all of the features described yet still benefit from at least some of the advantages of such features. Those of ordinary skill in the art may readily devise their own implementations of the apparatus, system, and method that incorporate one or more of the features of the present invention and fall within the spirit and scope of the present disclosure.

WHAT IS CLAIMED IS:

1. A non-slip mat comprising:
 - a top layer comprising of a woven material, the top layer having a first surface and a second surface;
 - a middle layer comprising of a first synthetic polymer, the middle layer having a third surface and a fourth surface; and
 - a bottom layer comprising of a second synthetic polymer that is different than the first synthetic polymer, the bottom layer having a fifth surface and a sixth surface; and
 - a reinforced outer hem formed on at least one edge of the non-slip mat by folding all the layers of non-slip mat at least once inwardly toward the bottom layer;
 - wherein the bottom layer has a repeated pattern; and
 - wherein the entire second surface of the top layer is bonded to the entire third surface of the middle layer, and the entire fourth surface is bonded to the entire fifth surface of the bottom surface.
2. The non-slip mat of claim 1, wherein the top layer is made of a woven material having a weight from about 6 ounces per square yard to about 8 ounces per square yard.
3. The non-slip mat of claim 1, wherein the middle layer is made of a low-density polyethylene (LDPE).

4. The non-slip mat of claim 1, wherein the bottom layer is made of PVC resin and polyester mesh.

5. The non-slip mat of claim 4, wherein the PVC resin and polyester mesh forms a webbed network, the webbed network comprises a series of nodes in a repeating alignment.

6. The non-slip mat of claim 1, wherein the bottom layer comprises one or more nodes forming a webbed network, the webbed network has an average column number density of nodes from about 90 to about 110 nodes per square inch.

7. The non-slip mat of claim 1, wherein the top layer, the middle layer, and the bottom layer are bonded through a lamination process.

8. A method for applying an adhesive coating material on a canvas comprising:

heating the adhesive coating material to a temperature such that the coating material reaches at least a liquid state;

heating at least one roller of an apparatus to apply a uniform thickness of the adhesive coating material;

advancing the canvas through the apparatus in a forward direction to contact the at least one heated roller;

applying, while advancing the canvas, a uniform coating of the adhesive coating material on a surface of the canvas with the at least one heated roller; and

cooling the coated canvas to a room temperature;

wherein applying the uniform coating of the adhesive coating material comprises: (i) applying the adhesive coating material on the at least one heated roller, and (ii) contacting the surface of the canvas with the at least one heated roller moving in a direction opposite to the travel of the canvas.

9. The method of claim 8, wherein heating the adhesive coating material comprises heating the adhesive coating material to the temperature ranging from about 180°C to about 190°C.

10. The method of claim 8, wherein heating at least one roller of the apparatus comprises heating the roller to the temperature ranging from about 180°C to about 220°C.

11. The method of claim 8, wherein the adhesive coating material is a slip resistance material that increases a frictional force.

12. The method of claim 8, wherein the adhesive coating material is styrene ethylene butylene styrene (SEBS).

13. The method of claim 8, wherein the canvas is made of cotton.

14. The method of claim 8, wherein the canvas is made of polyester.

15. The method of claim 8, wherein the canvas is made of cotton and polyester blend.

16. The method of claim 8, wherein the uniform thickness of the adhesive coating material is about 1% of a thickness of the canvas.

17. The method of claim 8, wherein the uniform thickness of the adhesive coating material is about 1.5% of a thickness of the canvas.

18. The method of claim 8, wherein the uniform thickness of the adhesive coating material ranges from about 1% to about 1.5% of a thickness of the canvas.

19. The method of claim 8, wherein applying the uniform coating of the adhesive coating material comprises applying the adhesive coating material on the at least one heated roller.

20. The method of claim 8, wherein applying the uniform coating of the adhesive coating material comprises applying a predetermined amount of the adhesive coating material on the canvas.

SLIP-RESISTANT PROTECTIVE MAT

ABSTRACT OF THE DISCLOSURE

A non-slip mat comprises an absorbent top layer, an impermeable middle layer, a non-slip bottom layer, and a reinforced outer hem. The reinforced outer hem is formed on at least one edge of the non-slip mat by folding all the layers of non-slip mat at least once such that the bottom layer is facing the bottom layer and the top layer is disposed on both top and bottom surfaces

A method for applying an adhesive coating material on a canvas includes heating the adhesive coating material and at least one roller of an apparatus, advancing the canvas through the apparatus in a forward direction to contact the at least one heated roller, and while advancing the canvas, a uniform coating of the adhesive coating material is applied on a surface of the canvas with the at least one heated roller.

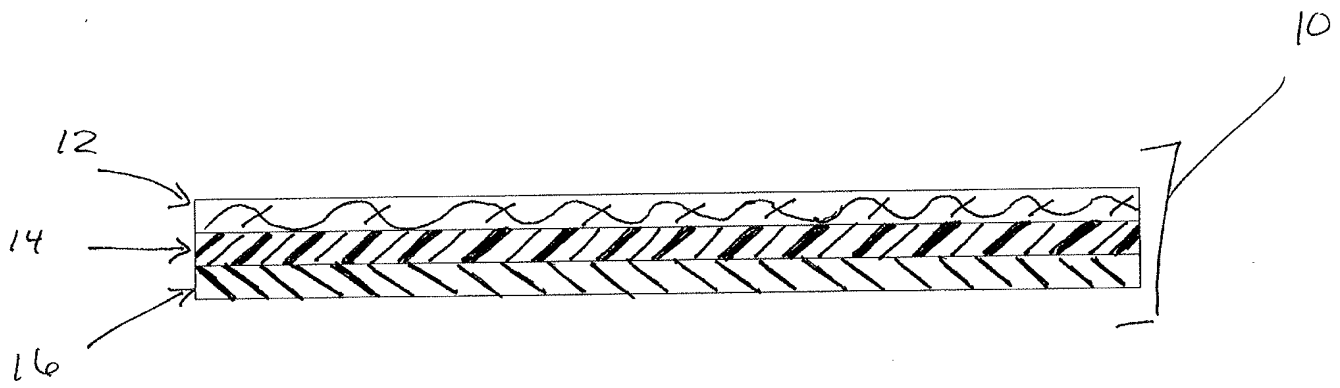


Fig. 1

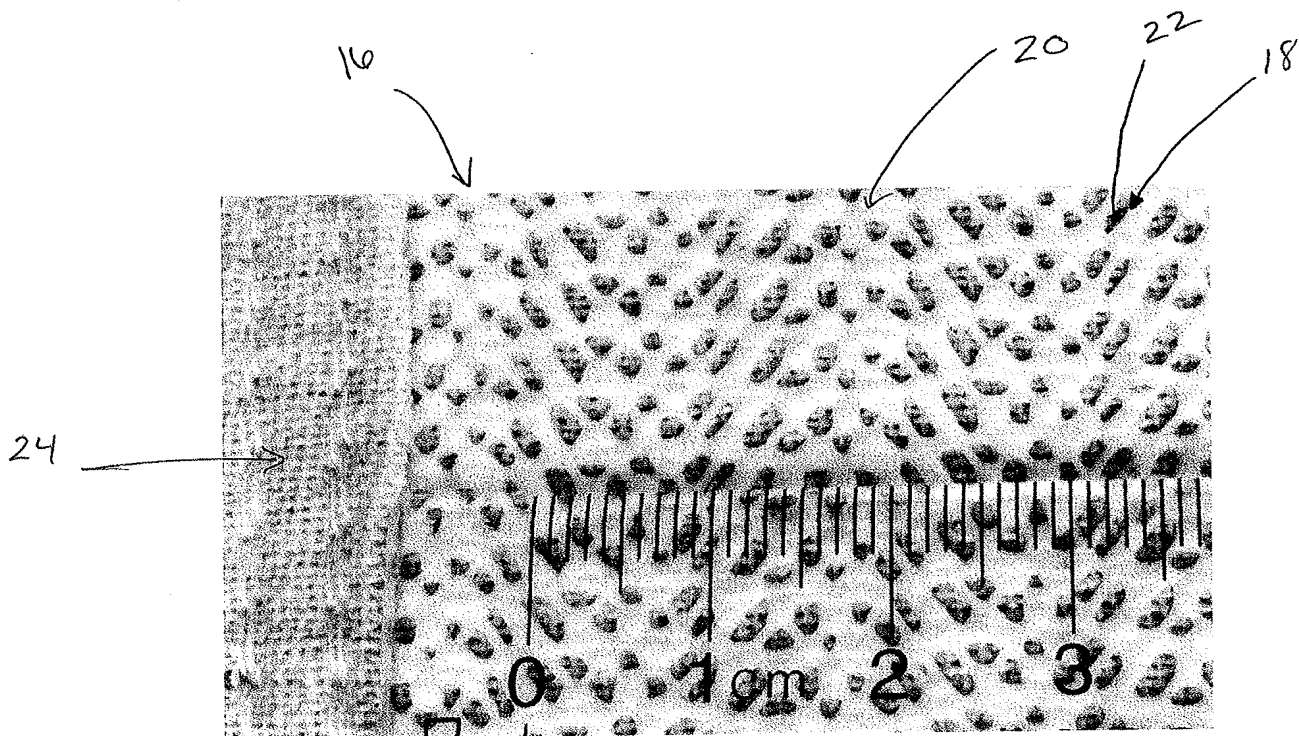


Fig. 2

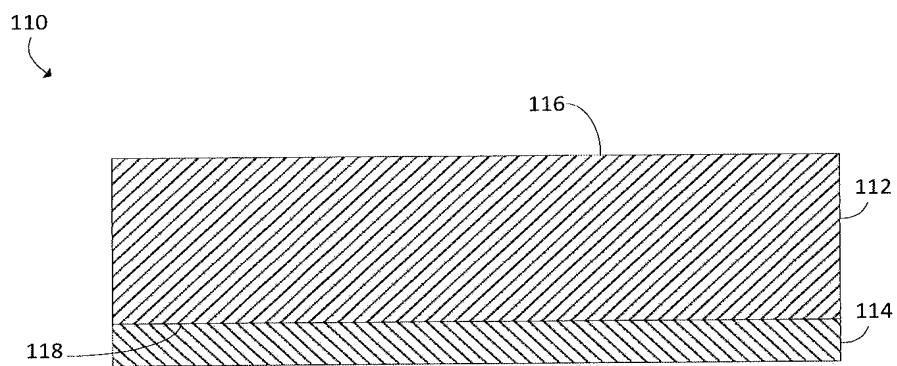


FIG. 3

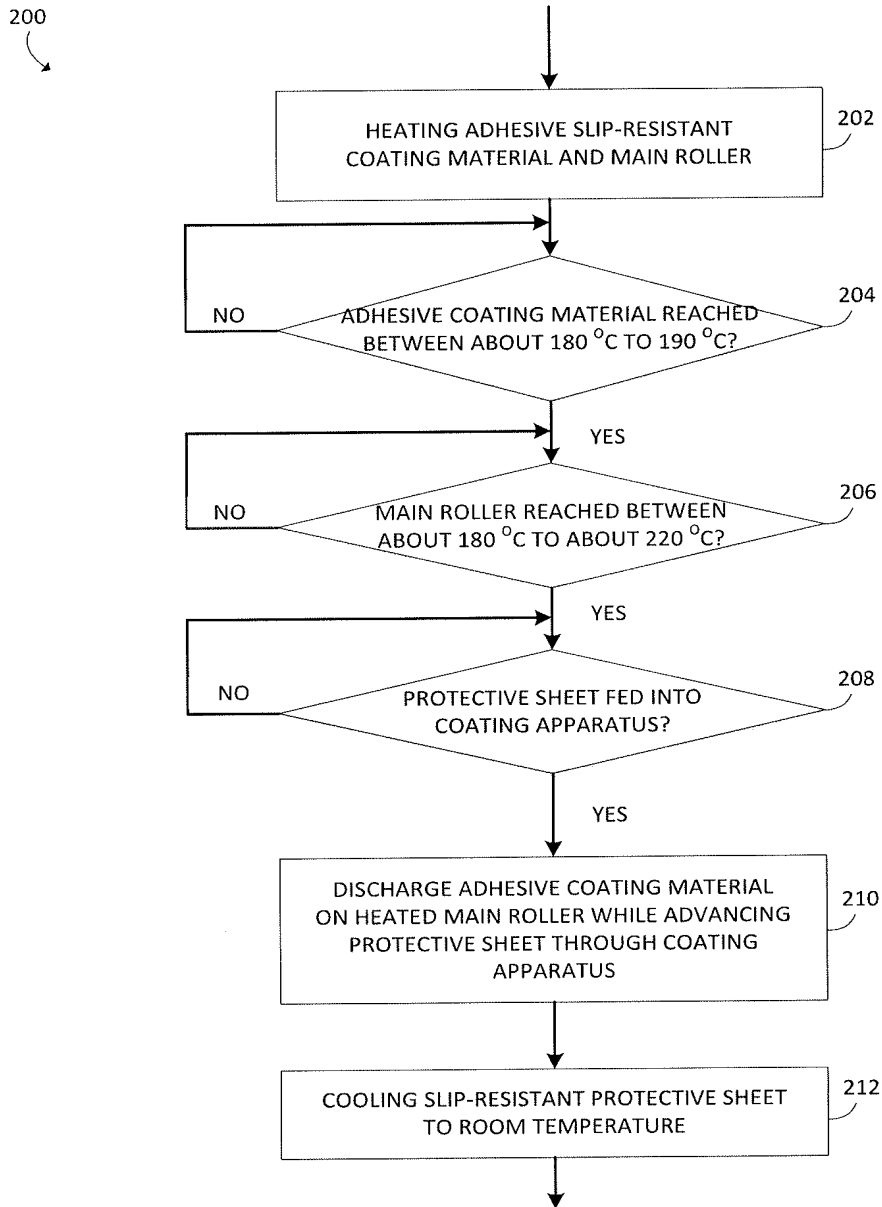


FIG. 4

Electronic Patent Application Fee Transmittal

Application Number:				
Filing Date:				
Title of Invention:	SLIP-RESISTANT PROTECTIVE MAT			
First Named Inventor/Applicant Name:	TRIMACO, LLC			
Filer:	Bradford G. Addison/Ernest Carlson			
Attorney Docket Number:	32251-259113			
Filed as Small Entity				
Filing Fees for International Application (PCT) for filing in the US receiving office				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
TRANSMITTAL FEE	2601	1	120	120
PCT SEARCH FEE- NO PRIOR US APPL FILED	2602	1	1040	1040
Suppl. Intl Filing Fee (each page > 30)	1703	5	15	75
Intl Filing first 30pgs EFS w/ ZIP file	1710	1	1158	1158
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				2393

Electronic Acknowledgement Receipt	
EFS ID:	27400995
Application Number:	
International Application Number:	PCT/US16/60109
Confirmation Number:	1080
Title of Invention:	SLIP-RESISTANT PROTECTIVE MAT
First Named Inventor/Applicant Name:	TRIMACO, LLC
Customer Number:	23643
Correspondence Address:	ADDISON, Bradford G. BARNES & THORNBURG LLP 11 South Meridian Street - Indianapolis IN 46204 US (317) 236-1313 INDOCKET@BTLAW.COM
Filer:	Bradford G. Addison/Ernest Carlson
Filer Authorized By:	Bradford G. Addison
Attorney Docket Number:	32251-259113
Receipt Date:	02-NOV-2016
Filing Date:	
Time Stamp:	16:52:28
Application Type:	International Application (PCT) for filing in the US receiving office
Patent Number:	

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$2393
RAM confirmation Number	110316INTEFSW00003697100435
Deposit Account	100435
Authorized User	Ernest Carlson

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.445(a)(1), (a)(2), (a)(4) and (b) (International application filing, processing and search fees)

37 CFR 1.17(m) (Acceptance of an unintentionally delayed claim for priority)

PCT Rule 14

PCT Rule 15

PCT Rule 16

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	ZIP	32251-259113.zip	54823 2d626bbab762649231509b27b77d70198e2589fa	yes	

Multipart Description/PDF files in .zip description

Document Description	Start	End
fees.pdf	1	2
pct101.pdf	1	6

Warnings:

Information:

2		259113SPEC.pdf	249075 0135278dcd732d8f34c9107bb1f57d8d7e51ee31	yes	26
---	--	----------------	--	-----	----

Multipart Description/PDF files in .zip description

Document Description	Start	End
Sequence Listing	1	20
Claims	21	25
Abstract	26	26

Warnings:

Information: [Case 5:22-cv-00015-FL](#) [Document 17-5](#) [Filed 04/18/22](#) [Page 61 of 62](#)

3	Drawings-only black and white line drawings	259113FIGURES.pdf	206744 ee863bcf631f6120788221efff4783fa3c3b464f	no	3
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	37106 714b5ae743d033b515e97bec8dda39a8a6dbb209	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			571079		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					